

Notice of Allowability

Application No.

10/608,303

Examiner

Minh Nguyen

Applicant(s)

LIN ET AL.

Art Unit

2816

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment filed on 5/3/04.
2. ☒ The allowed claim(s) is/are 2-14, 16 and 17.
3. ☐ The drawings filed on _____ are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☒ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☒ including changes required by the attached Examiner's Amendment / Comment ~~or in the Office action of~~ Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

Minh Nguyen
Primary Examiner
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EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with an attorney of record, Hung Chang Lin, on 4/12/04.

2. The application has been amended as follows:

In claim 2, line 7, "at" has been replaced by -- connected to --,

line 7, -- for ac shorting the output -- has been inserted after "terminal".

In claim 9, line 1, -- differential -- has been inserted after "said".

In claim 12, line 1, -- single-stage analog -- has been inserted after "said",

line 2, "conductance multiplier" has been replaced by -- transistor --,

line 3, "a" has been replaced by -- said --,

line 4, "set to said zero ac output" has been replaced by -- connected to the output terminal --.

CHANGES TO THE DRAWINGS

3. The following changes to the drawings have been approved by the examiner and agreed upon by applicant:

Figure 2:

1. The phrase -- AC SIGNAL INPUT -- will be added at the terminal labeled "V1",
2. The phrase -- QUADRATURE OUTPUT -- will be added at the terminal labeled "V2",
3. The direction of the arrow on the line connected to the V2 terminal will be changed, i.e., pointing outward the MX to clearly show the key inventive feature which is the quadrature signal is output to the input terminal V2.
4. A capacitor connected to ground will be added to the terminal labeled "OUTPUT=0".

In order to avoid abandonment of the application, applicant must make these above agreed upon drawing changes.

REASONS FOR ALLOWANCE

4. The following is an examiner's statement of reasons for allowance: Claims 2-14 and 16-17 are allowed.

Claims 2-14 and 17 are allowed because the prior art of record fails to disclose or suggest the inclusion of an analog multiplier wherein the quadrature output signal is derived from an input terminal by ac shorting the output terminal as recited in claim 2. The inclusion of the recited limitation defines patentability over the prior art of record because by forcing the output

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signal to the input terminal, the number of elements needed to generate a quadrature signal is reduced.

Claim 16 is allowed for the same reason noted in claim 2.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Minh Nguyen whose telephone number is 571-272-1748. The examiner can normally be reached on Monday, Tuesday, Thursday, Friday 7:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Callahan can be reached on 571-272-1740. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



5/13/04

Minh Nguyen
Primary Examiner
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